

Contents

Volume 103, May 1988

J. C. BUTCHER (Auckland, New Zealand) On a Class of Matrices with Real Eigenvalues	1
M. W. BROWNE (Pretoria, South Africa) AND H. NEUDECKER (Amsterdam, The Netherlands) The Covariance Matrix of a General Symmetric Second Degree Matrix Polynomial Under Normality Assumptions	13
DAFNA SHASHA AND DANIEL HERSHKOWITZ (Haifa, Israel) Maximal Lyapunov Scaling Factors and Their Applications in the Study of Lyapunov Diagonal Semistability of Block Triangular Matrices	21
WEN-WEI LIN (Hsinchu, Taiwan) The Computation of the Kronecker Canonical Form of an Arbitrary Symmetric Pencil	41
LUCAS JÓDAR (Valencia, Spain) Explicit Solutions for Second Order Operator Differential Equations with Two Boundary Value Conditions	73
M. J. C. GOVER (West Yorkshire, England) A Ring of Brownian Matrices	87
NICHOLAS J. HIGHAM (Manchester, England) Computing a Nearest Symmetric Positive Semidefinite Matrix	103
BOJAN MOHAR (Ljubljana, Yugoslavia) Isoperimetric Inequalities, Growth, and the Spectrum of Graphs	119
CHONG-YUN CHAO (Pittsburgh, PA) A Remark on Symmetric Circulant Matrices	133
D. J. EVANS AND C. LI (Leicestershire, England) Analysis of a Symmetric Extrapolated Iterative Method for Solving Linear Systems	149
RAFAEL BRU AND MICHAEL NEUMANN (Storrs, CN) AND LUDWIG ELSNER (Bielefeld, Federal Republic of Germany) Models of Parallel Chaotic Iteration Methods	175
H. BART AND H. HOOGLAND (Rotterdam, The Netherlands) Complementary Triangular Forms of Pairs of Matrices, Realizations with Prescribed Main Matrices, and Complete Factorization of Rational Matrix Functions	193
H. BART AND P. S. M. KOP JANSEN (Rotterdam, The Netherlands) Upper Triangularization of Matrices by Lower Triangular Similarities	229
AUTHOR INDEX	249

SABUROU SAITOH (Kiryu, Japan)

Quadratic Inequalities Associated with Integrals of Reproducing
Kernels

269

AUTHOR INDEX

281

Special Issues in Progress

1. Proceedings of the Victoria Conference on Combinatorial Matrix Theory. To appear as Volume 107, August 1988.

2. In honor of Alan J. Hoffman on his 65th birthday; special editors are Robert E. Bixby, Uriel G. Rothblum, and Alexander Schrijver. Submission deadline: December 31, 1987. Details in Volume 85, January 1987.

3. Proceedings of the Valencia Conference on Linear Algebra and Applications; special editors are Michael Neumann, Graciano de Oliveira, and Vincente Hernandez. Submission deadline: December 31, 1987.

4. Proceedings of the Fourth Haifa Matrix Conference; special editors are Abraham Berman, Daniel Hershkowitz, and Leonid Lerner. Submission deadline: April 30, 1988.

5. Linear Systems and Control; special editors are P. A. Fuhrmann, H. Kimura, and J. C. Willems. Submission deadline: May 31, 1988. Details in Volume 99, February 1988.

6. Linear Algebra and Statistics; special editors are Michael D. Perlman, Friedrich Pukelsheim, and George P. H. Styan. Submission deadline: September 30, 1988. Details in Volume 99, February 1988.

7. Linear Algebra in Image Reconstruction from Projections; special editors are Yair Censor, Tommy Elfving, and Gabor T. Herman. Submission deadline: November 30, 1988. Details in Volume 99, February 1988.